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ABSTRACT

This 6-year study examined how metacognitive strategies could enhance learning achievement and whether the use of individual learning contracts could enhance an individual's ability to become a conscientious learner. The criteria included whether students would learn by planning, controlling, monitoring learning processes, and using study skills. The process of using metacognitive strategies included setting goals for individual learning programs, developing individual learning contracts, monitoring learning processes, writing reflective journals, conducting individual conferences with the instructor, and being involved in summative evaluations. Participants were 222 college students. At the beginning of the semester, the instructor explained the purpose of the Individual Learning Plan (ILP), connected students to resources, and set the time frame for planning. The instructor reviewed students' ILPs for learning objectives and strategies, self-monitoring processes, evaluation processes, expected grade, and feasibility. At the end of the semester, a summative evaluation was implemented, and an individual conference invited feedback. Students were asked about how well they used the skills and the overall effectiveness of the ILP. Data analysis involved tallying survey forms and transcripts from interviews and reflective journals. Results indicated that this process helped students become conscientious learners. The instructor found that using learning contracts, appraisals, reflective journals, and conferences helped develop a rapport with students. (Contains 11 references.) (SM)

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Enhancing Metacognitive Skills through Learning Contracts

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Abstract

The purpose of this six year study was to understand how strategies of metacognition can enhance learning achievement. The second purpose of this study was to ascertain whether the use of learning contracts can enhance an individual becoming a conscientious learner. Two hundred and twenty two students enrolled in a course entitled "Developmental Reading in the Content Areas" participated in this study from 1991 to 1997. The process of using metacognitive strategies included: setting goals for individual learning programs, developing individual learning contracts, monitoring learning processes, writing reflective journals, conducting one-on-one conferences, and involving students in summative evaluations. Evidence was found that this process helped students to become conscientious learners. Implications for applying these strategies in different educational levels, and for different courses were discussed.

Enhancing Metacognitive Skills through Learning Contracts
by Linda H. Chiang, Anderson University

I. Objectives

This six-year study examined how using learning contracts enhanced students' use of metacognitive skills. The criteria included whether students will learn by planning, controlling, monitoring learning processes, and using study skills. One purpose of this study was to understand how strategies of metacognition enhance students taking responsibilities for their learning and academic achievement. The second purpose of this study was to ascertain whether the process of using learning contracts helped students to become conscientious, responsible learners.

II. Perspectives

The term metacognition has been used to describe our knowledge about how we perceive, remember, think, and act. Therefore, metacognition refers to the awareness of and control over one's cognitive process. Schraw (1998) defined metacognitive skills as those that help a person understand and regulate cognitive performance. Researchers have found that students need instructions and guidance to practice metacognitive skills (Maryland State Department of Education, 1990). According to Garner (1990) metacognitive abilities begin to develop around the ages of five to seven and improve throughout school. Most children go through a transitional period when they can apply a particular strategy if reminded, but will not apply such strategies on their own. Schunk (1994) argued adults can learn skills and acquire metacognitive knowledge via modeling. College students, therefore, need to be reminded, modeled, and encouraged to use metacognitive skills. The application of metacognitive strategies in colleges has been used in diverse courses, such as World History ((Fox, 1995), Biology (McCrindle & Christensen, 1995), and Computer Science (Volet, 1991). Those successful cases reported using metacognitive strategies have increased students awareness and control of their learning processes. In recent years reading as a cognitive perspective has become a new interest among some educational psychologists (Andre, 1987; Perfetti, 1992; and Stanovich, 1993,

in Smith 1998). However, there is virtually no research that has examined the impact on reading comprehension with learning contracts.

The learning contract is a means for making the learning objectives clear to both the learner and the instructor. By participating in the process of implementing a learning contract, the learner develops a sense of ownership in the learning plan. Learning contracts provide a vehicle for making the planning of learning experiences a mutual undertaking between a learner and his or her helper, mentor, teacher, or peers.

Allen Tough in "The Adult Learning Projects" (1979) found that when adults go about learning something naturally, they are highly self-directing. Knowles further claimed that what adults learn on their own initiative, they learn more deeply and permanently than what they learn by being taught (1986).

Contract learning is an alternative way of structuring a learning experience. This concept originated from the practice of independent study and later was enriched with studies of self-directed learning (Knowles, 1986). In this study the Individual Learning Plan (ILP) was used to assist students in utilizing metacognitive strategies to accomplish a project in a "Developmental Reading in the Content Areas" course.

This study applied an Individual Learning Plan (ILP) which served as a learning contract between the instructor and each individual student to monitor student use of metacognitive strategies. The process included: setting ILP goals, developing an ILP, monitoring the learning process, writing a reflective journal, conducting one-on-one conferences, and making summative evaluations.

III. Methodology

The instructor began this study in 1991. During the following six years, 222 students who enrolled in the one semester course "Developmental Reading in the Content Areas" participated in this study. At the beginning of a semester, the instructor explained the purpose of the Individual Learning Plan (ILP) to the students, connected the learners to resources (books, library, CD ROM, etc.), and set the time frame for planning. Once students filled out their plans, the instructor reviewed their ILP's for the following information:

1. Are the learning objectives clear and realistic?
2. Are the learning strategies and resources reasonable and appropriate?
3. Are self monitoring processes included?
4. Are the evaluation processes reasonable and appropriate?
5. Is an expected grade listed?
6. Are the designed projects reasonable and applicable to the teaching unit?

During the process the learners are given freedom to take initiative in choosing their own resources for implementing the ILP and how they will monitor themselves to achieve their learning goals. The learners indicated the grade they expected to receive, but the instructor retained the responsibility for determining the grade. Both the instructor and the students obtained a copy of the ILP, but the students were held accountable for monitoring their learning processes.

At the end of the semester, a summative evaluation was implemented and a one-on-one conference followed to invite feedback. Students were asked how well they used the skills and the overall effectiveness of the ILP. Data were analyzed by tallying survey forms and transcripts from interviews and reflective journals. Data were reported in percentages and anecdotes from conference interviews and journals.

IV. Summary of the Findings

During the interaction with the students, the instructor developed extensive two-way communication with the students. Students reported there was a positive impact on their own learning using the learning contract. The reported data found using an ILP as a contract helped students to become aware of their own learning and knowing what they learned. Most of the students reported using an Individual Learning Plan as a contract was a first time experience (N=220, 99.1%). Students reported the most common used strategies included: note-taking (N=195, 87.8%), underlining (N=191, 86%), and summarizing (N=117, 52.7%). Seventy seven percent of the students (N=170) reported that they always understand what they read in their textbooks, and 94% (N=208) reported that most people understand what they write. The participants also reported

they become more conscientious of their learning (N=170, 76.6%) as the result of the benefit of using individual learning plans.

The researcher's one-on-one student conferences revealed that most students gained more confidence in planning and monitoring their own learning. They reported that they comprehend and retain more information. They felt they had control of their learning accomplishments. Some students expressed that the reminders from the instructor helped the learning process. Their journal indicated their positive responses to the utilization of the Individual Learning Plan. One student stated " I will use the individual learning contract when I have my own class." Another student stated " I began to evaluate my study skills and reading rate and comprehension. I have learned what to focus on in content.", and " I think the metacognitive strategies are helping me to remember what I read."

V. Importance of the Study

Cultivating learners' passion for learning, according to Jalongo (1991), is to build character through which learners could be initiated to the learning experience, motivated to pursue a goal, encouraged to use mistakes as opportunities for learning, and decided on one's pace to learn. The ILP motivated students to set goals for their learning, selected ways they reflected on their progress, monitored their own learning, and received reminders and encouragements from the instructor. Though due to the limitation of credit requirement, the students were required to accomplish their learning goals in the time frame of a semester, most students fulfilled their goals. In these six years none of the students received grades lower than a "C". It is obvious to the instructor that many of the students felt they were ready for their own learning and teaching toward the end of the semester.

To sum up, the researcher felt teaching effectiveness heavily relies upon effective communication. This study found using learning contracts, appraisals, reflective journals, and one-on-one conferences helped the instructor to develop a rapport with her students. This rapport helped the students both cognitively and affectively. This study also found metacognitive skills can match learning

theories and teaching strategies. Uses of learning contracts allow students to assume learning responsibilities and make good use of metacognitive skills in their learning. Learning contracts proved to help students to monitor and judge what is to be learned and applied in their learning process. The potential and possible usage of learning contracts **is an alternative way to motivate students to learn.**

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